2006 STRATEGIC PLAN

For The

MAHONING COUNTY, OHIO

DATA PROCESSING BOARD

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&

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1.0   INTRODUCTION

1.1   Purpose

The purpose of this strategic plan is to summarize the goals and issues facing the Data Processing Department. This plan will categorize and prioritize the items most important to the success of this department in the coming year and beyond. These descriptions will include a discussion of the resources necessary for completion, estimated timelines, and a narrative of the potential impact of each item on the County.

This strategic plan will serve as the basis of Data Processing Department decisions and actions for the near future. These issues will be weighed against the contents and priorities of this plan and appropriately evaluated. Data Processing will make every effort to adhere to the following plan in support of its primary mission as described below.

1.2   Mission Statement

> *"The mission of Mahoning County Data Processing Department is to provide and maintain a stable and secure network infrastructure, including knowledgeable staff, necessary to support the information systems critical to the County's day to day operations. Additionally, the Data Processing Department will provide proactive, cost effective solutions for County workflow processes and network environment."*

1.3   Issue Categorization & Goals

Adherence to Data Processing's Mission Statement requires a thorough evaluation of all critical issues facing the department. For the purposes of this document short term refers to goals expected to complete within the year while long term goals refer to those items relevant within the next three years. The rapid advance of both technology and the County's needs make detailed planning beyond a three year horizon suspect to inappropriate speculation. A yearly review and analysis will serve to keep both the short term and long term goals in line with Data Processing's primary mission.
A thorough examination of existing and expected resources and demands shows that the majority of critical Data Processing issues belong to one of the following five categories:

- Telecom and Data Processing Merge
- Infrastructure Issues & Direction
- Staffing Issues
- Internal Employee Education, Training, and Policy
- Business Application Systems

- New Initiatives

2.0   TELECOM AND DP MERGE

In Mid-2005, a thorough evaluation of our network infrastructure began with the intent to determine whether a different combination of connections and technologies might provide a more cost effective and efficient solution than the leased lines from SBC. However, due to the convergence of technologies in recent years it was clear to the Data Processing Board that any changes to our network would only be effective if all aspects of both Mahoning County's data and voice networks were considered holistically. It had become clear that treating and controlling voice and data separately had lead to much inefficiency in the past. Recognizing this fact, the Board of Commissioners conceded authority over the county's voice network and phone systems to the Data Processing Board. This would place the governance of all of the county's networks in the hands of the resources most qualified to manage it properly.

2.1   Master Maintenance Agreement –Voice & Data Network

Now tasked with the responsibility over both sides of the county's network needs the Data Processing Department was able to precede with its evaluation of all network resources and voice/data lines.

In September 2005, Choice One, at the request of the IT Director, entered the picture to evaluate the Mahoning County network to compete with AT&T (formerly SBC) who provides the county WAN Network. Master agreement Savings packages and presentations where given by both AT&T and Choice One for the Data Boards and the Board of Commissioners on February 2nd, 2006. Key Selling points that Data Processing had identified include:

- Little or no MAR – (Minimum Annual Revenue) Commitment
- Contract not greater than 3 years in length.
- No penalty for grooming the network, i.e. reducing lines that are not used, and adding lines as necessary.
- Options to upgrade to any newer technology that may be developed and would be advantageous for the County.
- Ability to consolidate all billing during 3 year tenure
- Historical Service level performance
- Overall Cost of plan

After reviewing the terms and details of both proposals, Data Processing formally recommended to the Data Board on March 2nd, 2006 that Mahoning County continue to use the services of AT&T. The main reasons for choosing AT&T were:

1. AT&T is the current provider of services and no conversions or migrations will be needed.
2. No Department or service interruptions to implement the Master Maintenance plan.
3. Immediate cost savings over current monthly amount is $26K (40% savings).
4. Ability to recalculate the 36 month Agreement in 12 months, to attain economies of scale.

Conservative estimates show that these changes will make the network (both voice and data) faster and more redundant **while saving the county well over $350,000 a year**. This Agreement was signed in March and became effective March 1, 2006.

2.2   CENTRALIZATION OF COUNTY VOICE & DATA BILLING

With the pending completion of a County Master Maintenance Agreement for the Voice and Data network, plans began in January to centralize the organization and payment of all County voice and data billing. By mid March, an Internal Service Fund had been created, $500,000 certified by the Auditor, and Purchase orders created for newly named vendor AT&T, to pay for all invoices. The Internal Service Fund will enable Data Processing to pay all the invoices and then allocate those costs back to the departments that have used these services. The County Telecom Analyst is in the process of creating projections based on information he has received from AT&T in respect to historical usage. By the end of April, each County Department will pay a percentage into the Internal Service Fund to cover the first 9 months of the year. In August, these projections will be re-evaluated and adjusted, if needed. Additionally, at the time of the first allocation of funds to the Internal Service Fund, Data Processing will take ownership of all County Voice and Data billing invoices, and be responsible for payment. This ownership will allow the Telecom Analyst and IT Director the ability to see, first-hand, what the County is being billed for, and identify those services that can be eliminated, as well as educate Data Processing of possible unknown services on the network.

2.3   Identifying The 3 U's – Unused, Unneeded, & Unknown

With AT&T being signed as the Mahoning County vendor for voice and data connectivity, and the all billing being centralized in Data Processing, Data Processing can now tackle the large task of identifying and removing unused, unneeded and unknown services. During the first 3 months of 2006, Data Processing has eliminated 10 DS1 lines that are not needed, saving the county approximately $3500.00 per month ($42K annually). Additionally, by removing these lines from the DS3, we have opened slots to roll all 5 of the county's point to point T1s to the DS3, enabling an even greater

costs savings.   The roll of these T1s is scheduled for late April 2006. Data Processing is confident that it has accounted for all DS1 and T1 lines and can justify their need for existence. Over the next 6 months, Data Processing will complete an audit of the entire Centrex, PBX, Measured Business, PRI, & Analog networks at Mahoning County, and remove all unused, unneeded, unknown lines in which the County is currently being billed.

2.4   Long Distance Service

With Data Processing given ownership of the voice and data, not forgotten is the now commodity, long distance service. At the start of the 2006 year, Mahoning County used 4 different vendors to provide long distance and an average rate of .062 cents per minute. Rather than bundle this service with the 36 month Master Agreement, Data Processing asked AT&T to quote this service in a separate 1 year contact. Data Processing signed this Long Distance agreement at the same time as the Master Plan.   The rate is .035 cents per minute.   Data Processing will work with AT&T to port all numbers over to this long Distance plan over the next 2 billing cycles and will rely 100% on AT&T as their long distance provider by mid year 2006.

2.5   Maintenance Plan for County Inter-Tel Phone System

The final piece to the complete the merge of the County Telecom network/application and Data Processing is the component that powers our in house phone switching, voice mail, call accounting and basic voice service. This is the Inter-Tel phone switch the county purchased in 2000. There are presently 8 'nodes' located at sites disbursed throughout the county. The nodes have NEVER had any software maintenance, upgrades, reconfigurations or improvements. As a result, their current software version is incompatible with any new telephone equipment that the County purchases. For example, the Mahoning County Sanitary Engineers Dept. purchased a new Phone system from Inter-tel in March, bringing the node count to 9. The new Sanitary system is unable to integrate with our current system (our current hardware and software levels are 4 to 5 releases behind). As a result, our goal of integrating our nodes with Sanitary for the use of 4-digit dialing, reporting, Call accounting and newer features such as unified communications can not be accomplished, until we bring our nodes up to current level. Data Processing is currently working with the phone switch Vendor, Inter-tel and Authorized reseller, Tele-Solutions to determine our specific needs and the gathering the details to incorporate into a Master Maintenance Agreement that will enable a complete upgrade of all hardware associated with all sites, Bringing all of our nodes to the same software version. This will allow us to move forward with 4 digit dial, merging voice-mail systems, a Call Center application, call accounting system, and Unified Communications. Additionally, any break/fixes would be covered under this agreement.

The long term goal would be reduced costs by having DP take an active role in support of this contiguous software and hardware platform.

3.0 INFRASTRUCTURE ISSUES AND DIRECTION

An information technology organization's effectiveness will always be limited by the infrastructure it is built upon. Just as a cracked foundation will lead to structural problems in a home, a poor technology infrastructure will forever lead to consistent end user problems, security issues, disaster recovery obstacles and barriers to standards and new system implementations. For these and numerous other reasons, building a proper infrastructure will remain top priority of the Data Processing Department.

It shall also remain vitally important to continually manage internal and external expectations on this issue. Data Processing staff, department heads, and end users must all be educated to understand that until critical infrastructure problems are resolved there may be no feasible workarounds for some common end user issues. Certain end user needs may go unanswered in the short term while Data Processing concentrates on fixing or building the necessary infrastructure components an enterprise like Mahoning County requires. As Mahoning County continues to utilize more technologies across more departments and agencies it becomes even more critical to ensure a proper infrastructure foundation. Failure to maintain a suitable infrastructure to support continued growth will lead to extreme systems and operational problems.

The infrastructure referred to above consists of a physical and logical layer. The physical infrastructure layer is made up of the core switches, routers, firewalls, data & voice lines, and servers that make up the County's physical wide area network. Flaws in the implementation or deployment of any of these pieces can affect every aspect of Data Processing's operations.

The logical layer consists of the network domain structure, security boundaries, network communication protocols, and back office software systems that support the standard information needs of any organization. The proper functionality of these systems are critical to simply maintaining a stable networked environment, independent of any County specific business applications.

The sections below detail the currently identified critical infrastructure issues pending resolution by the Data Processing Department.

3.1 4th Floor, Admin Bldg Data Center Room Creation

Currently, the bulk of Mahoning County's physical network and server infrastructure resides in the Data Center in the basement of the Mahoning County Courthouse. However, Data Processing staff offices and work areas are on the 4th floor of the Mahoning County Administration Building. This physical difference in location,

although not extreme, does present certain daily obstacles to routine operations and emergency problem solving efforts. In an effort to resolve these issues, along with other reasons detailed below, plans have been drafted to move the Data Center operations and equipment to the large storage room on the back half of the 4th floor of the administration building.

Relocating the Data Center to the same premises as the staff provides at a minimum the fastest opportunity to respond to hardware and system problems as they occur. It also drastically reduces the time wasted by Data Processing staff running back and forth between the two buildings every day to perform routine backup tape rotations, report printing, and system diagnostics.

A move of this nature also presents an opportunity to reinstall, from the ground up, the physical switch and server network in an optimal design. The current Data Center was originally designed to house and support less than half of the current equipment in use. For this reason switch location, network cabling, and power lines exist in extremely inefficient structure that complicates daily support and troubleshooting capabilities. Reinstallation in the new location would be done according to an optimized data center blueprint that meets all current needs and properly accounts for and can accommodate expected growth in the future. This will result in long term cost savings as our network expands and great reductions in time for staff and vendors to resolve many potential network problems/issue as they may arise.

Completion of the Data Center has all preliminary steps completed, which included:

- HVAC installed in 4th Floor location to provide proper cooling environment. This will be performed 2nd quarter 2005 in conjunction with the Facilities Management Department. Completed October 2005, Turn up on May 1st 2006.
- Installation of multiple strands of fiber optic data cable from the 3rd floor Phone room to the new 4th floor location. This will provide the high bandwidth data connection required to maintain network connectivity with all servers and users in both buildings. Completed October 2005.
- Installation of anti-static server room grade carpet. Completed September 2005.
- Installation of a step-up transformer (208V to 480V) to power the UPS unit currently in the Court House. Completed December 2005,
- Purchase of miscellaneous cable trays and cable management supplies to ensure proper connectivity of all equipment in the new location. Completed.

Remaining to complete the Data Center Room project include:

- Vacuum sealing of the room for optimal temperature and humidity maintenance.

- Conduit ran from the basement to the 4th floor for installation of OC-3 Fiber Ring by AT&T.
- Miscellaneous odds and ends that can be performed by Facilities. A list was given to the Facilities Director in mid-March with a requested completion date of May 15th.

3.2 Installation of OC-3 "SONET" Fiber Ring

As of January 1st, 2006, the County supported 28 point to point DS1 connections on a DS3 fan from the County Courthouse to remote county buildings. Approximately 5 additional point to point T1 lines connect the courthouse to other sites. These 33 leased lines currently make up the bulk of Mahoning County's wide area network (WAN).

These lines provide 1.5MBs bandwidth and are leased by AT&T (formerly SBC) at a cost of approximately $250 to $1000 a month each, depending on location. They provide remote offices (everything other than the central courthouse) the necessary network connection to all of the county's information systems running in the data center.

With the pending move of the Data Center to the 4th Floor Administration Building on 21 W. Boardman St, and the signing of a 3 year Master Maintenance plan with AT&T for voice and data services, Data Processing has determined the next step to achieve greater costs savings and increased enterprise level services is to install an OC-3 Fiber ring. This service is an AT&T provided service. There are 5 main reasons Data Processing recommend this installation.

1. Provide redundant fiber based connectivity to the Local Exchange.
2. Lower costs by moving DS1 and DS3 MUX to the OC-3
3. More flexibility to add/delete T1s from the network.
4. Moved AT&T demarcation point to 4th floor Data Center.
5. Remove multiple points of failure on the network- old Cisco 7204 router

Installation of the Fiber Ring is necessary before the New Data Center Room can be operational. Data Processing projects that the OC-3 Ring will be installed in the early June.

Additionally, as part of the New Data Center initiative, fiber based Internet access will installed with more bandwidth than ever before, somewhere in the range of 10Mbps. Currently, the county has a 4Mbps (download) and 2Mbps (upload) internet access. The increase in bandwidth is needed to support the GIS system, site to site VPN connection to remote location where running a T1 line is not cost effective, and VoIP over the Internet. As part of this upgrade a new Cisco VPN solution will be installed, offering remote access for any county employee who needs it, as well as robust site to site VPN connectivity.

3.3   Installation of High Capacity Storage System (NAS)

With the Pending move of the Data Center to the 4th Floor Administration Building on 21 W. Boardman St, Data Processing has investigated to solve two problems in one swipe.

1. The GIS Department is in need of additional disk storage space for their ever-expanding application. They are asking for 3-5TBs of disk space. Currently, the County has 3.5TBs of usable space, with very little free space. GIS will have to buy additionally Disk Storage medium.
2. Data Processing is will be responsible for physically moving the current storage System to the New Data Center when this move is ready. This will require impeccable timing and extensive after hours work time to avoid any downtime. Additionally, there are significant risks associated with Data Processing moving these expensive, yet fragile, disks between buildings.

To address these 2 problems, Data Processing has decided the most cost effective and best solution would be to purchase a new storage system migrate the data from the old to the new. In this manner, the Data Center move can be staggered and more cautiously planned.

3.4   New IP Address Scope & Standards

Currently Mahoning County's network addressing scheme consists of roughly 24 large Class B subnets (65,000 IP addresses per subnet). Although address ranges have been narrowly defined and DHCP ranges scoped for each physical location (every end of a T1 line) there is no current feasible method to manage devices not in our desired ranges. Additionally the broad scope of Class B subnets makes all network discovery tools inefficient. Finding rouge devices on the current network is next to impossible.

To address these and other related problems, Data Processing has a network "Shrink" project currently led by the IT Director. This project is redesigning our network addressing standards throughout our whole network. The plan will include the following elements:

- Creation of well defined Class C subnets (255 IP addresses per subnet) for all physical sites
- Proper VLANs for each site (defined by core routers and switches)
- Addressing standards for different classes of devices (servers, PCs, network equipment, wireless devices, printers, etc…)
- Routing QoS implementation for VoIP & real time protocols.

This will require significant effort from the IT Director and members of the Data Processing staff. I can not stress enough the value of this project in terms of new technology and laying the groundwork for high-end routing of voice and data solutions. Currently, 50% of the remote locations have been completed. Already, we are seeing improvement and when 100% complete, the result will be an extremely more manageable and secure physical network layer. Completion of this project will coincide with the completion of the Data Center room move.

3.5   Relocation of the Data Center

Once the objectives above are met, Data Processing will be ready to move into the New Data Center on the 4th Floor of the Administration Building. The work completed will provide many years of increased efficiency and a high end infrastructure to build Mahoning County's technological future. Relocation to the New Data Center is critical in the short term as well, as all of the above projects have been designed around the relocation of the Data Center Room.

The Physical move of all hardware from the courthouse to the 4th floor location will happen in mid to late summer. This is a projection because it is based on other projects being completed.   Due to the critical nature of this move, we will not start the project until Data Processing is 100% ready. This will require extensive planning and scheduling by the Data Processing Staff with potential assistance from Dell technicians. This is sensitive equipment that is both extremely large and heavy. It must be moved properly. The move should begin Friday end of business to give the Data Processing staff as much time as possible to reconnect and test all equipment prior to start of business Monday. This may take several weekends to complete. Data Processing expects to move the initial equipment into the new Data Center by July 2006, and target a completion date of September 1st.

3.6   Active Directory – Continued Domain Consolidation

The Active Directory Domain "MahoningCounty" (FQDN mahoningcountyoh.gov) remains the most critical component of our infrastructure. This domain serves as the foundation for all user, group, and resource management and the security framework upon which all other systems depend. It remains top priority to manage this domain properly and adhere to carefully crafted policies that help ensure a long term stable environment, particularly as the domain grows.

A number of events in the upcoming year will require significant additions to the central Mahoning County domain. These events include:
1. The completion of the migration from the legacy court case management system to CourtView 2000

2. Consolidation of the Board of Elections Network and Domain into the Mahoning County domain.
3. Consolidation of the Sheriff's Windows 2000 Active Directory domain and Exchange e-mail system into the Mahoning County domain.
4. Pending MOU with the County JFS will lead to increased involvement and leadership as JFS look to significantly upgrade their technology infrastructure.

The bottom line is that Data Processing has the most up to date, supported, cost effective domain security implementation in the county and all other General Fund domains should be consolidated for the greater good of the county.

3.7 Wireless Point to Point Network Implementation

This Project was started in 2005 and the groundwork was laid for the work to begin in Spring 2006. This project is being completely funded by the COPSMORE grant. The scope of the project includes new installation of core network hardware at the Jail, as well as new edge network hardware at all Mahoning County remote locations. The ultimate goal is to have a point to point wireless network between 19 different locations within Mahoning County, for access to the Jail system for local police forces. This will provide High speed wireless (10X faster than what the County currently has in place) and provide a level a redundancy to all remote locations. The design of this network was created by Data Processing and an FRP was advertised in July of 2005. Plum Creek System was the vendor that was chosen to install the actual wireless radios at all the sites. This work includes configuration of the radios, installation of parabolic antennas, and physical connectivity to the county network. Designated spots for the radios include water towers located on the west side of Youngstown and Austintown, as well as the respected county remote locations. Laptops will be purchased at the end of the project to be placed in cruisers for mobile access to jail and court data. The first link will be completed by May 1st, with the remaining links to follow over the next 60 days. When complete, this network will be fully owned and operated by Mahoning County Data Processing. This project will be complete when the Data Center move is complete, as the 4th floor of The administration building is the starting point for this network.

3.8 Improved Disaster Recovery

As Mahoning County becomes more and more dependent on newer information systems and data the current backup/restore and disaster recovery policies will become less effective. This can be attributed in large part to the significant increase in simple data size required by the critical systems implemented recently. These main systems include PeopleSoft, Manatron MVP, Maximus CourtView2000, Microsoft Exchange Server 2003, and GIS. The disk storage associated with these systems is approaching 3

terabytes and growing. This sheer volume of data presents significant challenges from a disaster recovery perspective. With the purchase of a NAS for the new Data Center room, the existing CX600 will be used as the central piece in our Disaster Recovery plan, saving the county around $50K in costs. Using server virtualization technology, Mahoning County will be able to reuse existing server hardware to create a offsite DR location that runs parallel to our existing infrastructure and mimics our critical server applications, providing up to hour backups in the event of disaster.   Target for completion of this project is December 31st 2006.

3.9   GIS Hardware and Software Upgrade

The GIS department at Mahoning County is one of the county's many great technological assets, and have built a GIS system that is highly regarded by many of our peer counties. With the hardware and software reaching over 5 years old in some instances, The GIS system has outgrown its current infrastructure. Data Processing is working the GIS department to evaluate and plan a migration of the system to newer hardware. This will involve the purchase of 2 high end servers, and the above mentioned NAS disk subsystem. The current system consists of 6 dedicated servers to meet GIS needs. Using newer technology and streamlined software configurations, DP can provide a better solution with the purchase of just two new servers and retire 5 of the older systems. Project will start with the completion of the Data Center Room move and has a tentative target completion data of October 1st.

4.0   STAFFING ISSUES

In order to provide the stable and secure infrastructure described above the Data Processing Department requires staff with particular tool sets. Without enough adequately trained personnel Data Processing has no hope of meeting the demands placed upon it.

4.1   Existing Staff; Skills, Capabilities, and Training Plan

Data Processing's chief staff problem at the present time is simply manpower. Fortunately, the current staff has an impressive array of technical knowledge sufficient to meet most challenges. However, lack of manpower presents significant operational problems on a daily basis as top skilled staff are required to deal with routine help desk support issues rather than concentrate on the more critical infrastructure and system issues. **With such a critically thin staff the Department is continually at risk of being unable to meet its daily end user demands or critical project deadlines.** This requires tight supervision and motivation to focus the staff on the most important and effective uses of their time.

Data Processing's employees represent the most valuable asset to Mahoning County's technological infrastructure, providing support of these systems that Mahoning County relies on, as well as upgrades, design and direction. All staff members are tasked with continual education requirements to keep their certifications current, thus ensuring their ongoing familiarity with the primary technology needs likely faced by Data Processing. Each staff member will be expected to attend at least 40 hours of professional training or education a year. This will include time for taking certification exams. Additional time outside of the working environment is assumed for ongoing education of each employee. This training is through New Horizons and will be attended in Cleveland or Pittsburgh throughout the 2006 Calendar year.

4.2   Staffing Needs

With losses to staff in 2005, Data Processing is short staffed as of the start of the 2006 year. Additionally, certain staff members have stepped into roles that they were not hired to do. With a change in leadership in the Auditors office in mid 2005, as well as in the Data Processing department, Data Processing has worked overtime to meet the changing needs and dimensions for these departments, and the county-wide agencies that we support.

At the start of 2006, the Auditor and the IT Director decided that developing the in house talent of current staff would proved the best long term solution, apposed to hiring from the public for the key positions in the department.

The current staff and their position consists of :

Jacob Williams	Director of Information Technology
Kevin Brogley	Application Analyst III / Peoplesoft support
Curtis Petrey	System Administrator
Brian Wright	LAN Technician II
Vacant	LAN Technician I
Cathy Walters	Application Analyst I /Operations MGR
Tom Fitzgerald	Telecom Analyst
Pam Myers	Trainer
Vacant	Help Desk Technician
Nancy Turner	Administrative Assistant

The two vacant positions are critical to fill, as DP is missing key components of a viable IT department. Both positions were posted internally in March and externally on Monster at the start of April. Target to fill these positions is May 1st for the Help Desk Technician and June 1st for the LAN Technician I position.

5.0   INTERNAL TRAINING AND POLICY

With a pervasive and growing technology presence in the every day operations of the County it is imperative that the technical and procedural education of its employees keep pace. The county can not afford stifling costs and risks associated with improper employee training. Data Processing has aggressively sought buy-in from all county departments and agencies and will continue to deliver high quality customized training to all county employees.

Data Processing maintains a modern computer training facility capable of handling fifteen employees at a time. The room is equipped with fifteen computers configured to existing county standards, an overhead projector, large wall mounted screen, white boards, and printers. This room will be utilized in the delivery of the following courses to both county employees and select groups of non employees.

5.1   Training Courses Offered

Data Processing's Technical Trainer creates and maintains a library of customized training classes and manuals specific to the county's needs. Existing courses are modified on a continual basis and new ones added as appropriate.

In the past year Data Processing has held 100+ classes and for over 700 county employees. Many of these employees have attended multiple types and levels of training. We receive very frequent testimonials from some of these users sharing how much this training has helped their jobs and made them more effective. This has also had the added benefit of significantly reducing the demand to our Help Desk for certain classes of routine PC problems.

The currently offered courses include:

1. Windows XP – Basic Computer Skills – Covers basic PC navigation, systems introduction, naming standards, how to manipulate files, find network resources, One Site, and basic emailing skills

2. Introduction to Microsoft Word – Covers basic Word navigation, borders and numbering, tables and clip art, thesaurus, spell and grammar check, the Format Painter, selecting skills

3. Introduction to Microsoft Excel – Covers basic Excel navigation, AutoSum, hiding and not hiding columns and rows, basic print settings, initial sorting, creating new worksheet, percentage formula

4. Introduction to Microsoft Outlook – Covers basic Outlook navigation and organization, emailing, calendar entries, contacts, tasks, notes, and public folders.

5. Introduction to Microsoft PowerPoint – Covers basic PowerPoint navigation, creating of slides, using templates, adding content, adding animation, saving to a CD, running the presentation

6. Functional Microsoft Access – Covers importing excel spreadsheets into Access, simple queries, simple form and report design

7. Intermediate/Advanced Microsoft Word – Covers advanced word processing skills including mail merge, form generation, brochure design, working with tables and graphics, etc…

8. Intermediate Microsoft Excel – Covers advanced printing and sorting, subtotals, basic functions, filtering, data tools

9. Advanced Microsoft Excel – Covers advanced spreadsheet usage including more formulas, more data tools, advanced charting, pivot tables, macros, etc…

10. Mahoning County GIS – Is an introduction to the navigation and data available on the county's Geographical Information System

11. Querying in PeopleSoft 1 – Covers how to create HR queries, manipulate criteria, export results to Excel, etc…

12. Querying in PeopleSoft 2 – Covers how to create financial queries, understanding relationships, linking tables, etc...

13. Vouchering in PeopleSoft – Taught as a One-on-One class, covers the skills needed to enter a purchase order voucher, standard voucher, control group, printing and assembling of the vouchers and groups

14. Updating the County Communicator – Covers how to make changes to each department's pages on the website, adding pictures, attachments, new pages, and internet links.

5.2   Increased Communication & Enforcement of Standards and Usage Policies

In addition to simply teaching county employees how to use our computers and software systems a strong effort will be made to education our employees on the proper vs. improper use of any county computing resources. All employees will receive a copy of the Data Processing Board's Computer and Email Usage Policies at the basic classes.

These classes will also include discussion and education on how to avoid potential legal and ethical problems regarding illegal downloading of media and software, abuse of the internet, personal use of email, etc…

Our basic training classes will also introduce county employees to the various policies and controls Data Processing has adopted over time. These include procedures addressing common issues like password change requests, account creation, employee termination, changes to security access, etc… As our network and systems grow it will become more important that all such activities are handled systematically per standard procedures to ensure the integrity of our systems over time.

6.0   SOFTWARE SYSTEMS AND APPLICATIONS

The Data Processing Department is responsible for a number of software systems and applications that support the various needs of all county departments. These systems can be broken into two categories: infrastructure systems and business application systems. Each is described briefly below.

6.1   Infrastructure Systems

The software and applications in this category represent those necessary to provide basic networking and user services. These systems serve the day to day needs of the entire organization and are necessary regardless of the needs of any one department. This category includes the following:

- **Active Directory** – The "MahoningCountyOH.Gov" Windows 2003 Active Directory domain is the underlying framework that provides for user and group account management and security. Users and Groups form the basis of all systems access control.   There are approximately 700 user accounts and 200 groups in the MahoningCounty domain. Several hundred additional accounts and groups exist in certain secondary domains.
- **DNS, DHCP, WINS –** These systems manage the network protocols and addressing schemes that enable all computers and devices to talk across the physical network.
- **EMC Clarion CX600/Navisphere –** This is the primary storage hardware and software system that provides disk space to the main county application and file servers. This fiber channel disk array provides significant redundancy and self healing capabilities to minimize the potential for data loss. This storage system also provides for extensive expansion capabilities. Mahoning County currently has approximately 3.5 Terabytes of disk space on this hardware. This space is primarily used for file storage and the GIS, MVP, and CourtView systems.
- **File Server –** File servers are the central repositories for all data files in the county. Through log-in scripts all end users have drives mapped to the central servers. This ensures maximum ability to provide secure file access and regular backup and restore capabilities.
- **Print Server –** Print servers manage the queues for all networked printers. They house driver information for all operating systems and provide the interface for end users to print to a networked printer from their local PC. We plan to phase out the County's reliance on a print server for in favor newer, less expensive technology.
- **Veritas Net Backup** – This central enterprise backup system provides the interface to backup to tape all critical county data and systems. Approximately 3 Terabytes of

data are backed up to tape on a daily basis. Once a week one set of tapes are then taken off site and stored permanently.

- **McAfee epolicy Orchistrator** – This provides enterprise wide anti-virus management capabilities. This system pushes regular updates of anti virus definitions to all county computers and our email system.
- **Exchange Server 2003 Enterprise Edition –** This is the county email system. This server software, in conjunction with the Outlook client on end user's computers enables all county employees to send and receive email. The current Exchange system manages approximately 600 mailboxes but is expected to grow to over 800 users in the near future as more departments consolidate their third party email usage onto our system.
- **SMTP Relay –** This Server is the software firewall that is the primary interface of our email system with the Internet. This provides anti-spam filtering and isolates our email server from being directly exposed to the Internet. This system replaced an inferior gateway product in August 2005.
- **HelpStar –** This help desk call tracking software enables the Data Processing Department to log help calls as they come in. Logged calls can then be prioritized and staff assigned for resolution. HelpStar also provides historical reporting and analysis tools that assist DP staff in numerous ways.
- **Intranet Web Server –** This system houses Mahoning County's new application, ONESite, a intranet product powered by Windows Sharepoint Services. This system is completely owned, operated and developed by Data Processing and provides an employee Directory, HR and Payroll Forms, Data Board purchase approval forms, and links to all the county's integral applications.
- **Microsoft Operations Manager (MOM) 2005 –** This real time monitoring system provides a single global view of all servers managed by Data Processing. MOM generates alerts and emails when specified systems are changed or fail. This alerts Data Processing staff in a proactive manner to many common system problems.

6.2 Line of Business Applications

The software applications in this section meet specific needs for individual or multiple county departments. They encompass a broad mix of third party vendor products and technologies to in house designed and built applications. They include:

- **PeopleSoft Financials 7.02** – The enterprise financial information system that services core needs of many departments. This product provides budgeting, purchasing, accounts payable, and general ledger functionality for all county departments.
- **PeopleSoft HRMS 7**.51 – Payroll and employee/benefits administration software system.

- **Time Capture –** Visual Basic application developed in house to provide a quick and easy to use interface for department payroll personnel to enter employee work hours and leave usage each payroll period. Time Capture interfaces with PeopleSoft HRMS.
- **Manatron Visual Property (MVP) –** This software system services most of the real estate related needs of the Auditor and Treasurer's offices. MVP functions as a computer aided mass appraisal (CAMA) system and property tax billing and collections management system. It also provides functionality for real property maintenance (splits, plats, etc…). Data from this system populates the Auditor's web site that many county residents rely on for up to date property tax and appraisal information.
- **Maximus CourtView 2000 –** This is an electronic court case management system. It serves the case management and scheduling needs for the entire justice system in Mahoning County including the Clerk of Courts, Common Pleas Courts, Domestic Relations Court, Probate Court, Area Courts, JJC, and the Prosecutor's Office. Plans to implement document imaging for the courts, and several web based services including public query, electronic filing from attorneys, and electronic payment of certain court fees will be completed by end of summer 2006..
- **Geographical Information System (GIS**) – The Mahoning County GIS provides, at the simplest level digital maps. However this enterprise system contains a wealth of information critical to the operations of the Auditor, Treasurer, Recorder, Engineer, Sanitary Engineer, other county departments and many private or commercial entities. The GIS system contains an almost unlimited potential to help the county manage its information better. The publicly accessible GIS web site has provided enormous public benefits already. Continued growth and utilization of this system will make it essential to many county operations going forward.
- **Emergitech InterCAD** – This computer aided dispatch (CAD) software system is used by the E911 call center. It is the core information system providing location and incident management abilities to call center dispatchers.
- **Prescription Drug Assistance Program (PDAP)** – This web based application was developed in house to provide the Council on Aging and local area senior groups assistance with learning of available discounts and acquiring necessary prescription drugs.   This Program was re-written by Data Processing in September 2005 to better serve the users of the program and has saved Mahoning County Seniors approximately $3.2 million in 2005 alone.
- **Various Web and Intranet Sites** – Data Processing hosts several departmental web sites on in house web servers, including the new intranet product ONESite, released October 2005 by Data Processing. Other web sites are vendor produced Administration sites for support of county services, including WSUS, a security patch management system deployed by Data Processing in August of 2005.

7.0   NEW SOFTWARE INTIATIVES

In addition to the projects and work described earlier, the Data Processing Department has plans for the following initiatives in the coming year.

7.1   The Mahoning County Communicator

Mahoning County's new unified web presence was completed on Dec 1st, 2005, providing an internet presence for all 52 of the County departments. The New product was branded the "Communicator" by Data Processing and has been a resounding success with upwards of 30,000 hits received per month since January 2006. However, there are still approximately 20 unique sites that various departments have to rely on a vendor to administer and pay hosting fees to support.

Phase II of the original project consists of migration of the unique look and feel of those remaining sites to the Communicator. These departments are already represented on the Communicator, however, some of the departments want to provide a more diverse offering of web services to the public. Additionally, the county will realized substantial savings by "turning off" those unique sites and having their services hosted on the Communicator.

Phase II will start in April and has a target completion date of August 2006.

7.2   Consolidation of It Services In Other County Agencies

While technically tasked with servicing the technology needs of the whole county, the Data Processing Board has had little involvement in the past with certain departments including Alcohol & Drug Addiction Services Board, Department of Jobs and Family Services, Mental Health Board, Children Services Board, and Child Support Enforcement Agency. These departments have considered themselves somewhat independent and more reliant on state IT systems than the county. However, this attitude is changing rapidly and Data Processing has recently had much success in showing some of these departments that we can provide better service and improve their operations by working closer together.

It is also clear that over time, these departments will become increasingly reliant on some of the core systems and services provided by Data Processing. For example, there are numerous efficiencies to be gained by simple changes like bringing these department staff onto the countywide email system to promote better communication across departments.

However, the transition from current arrangements to full cooperation and mutual benefit requires careful planning and coordination of resources in all departments involved. The sheer number of employees and computers in these departments brings certain challenges. We must ensure that proper licensing is in place for the increased demand on infrastructure systems like email, anti-virus, domain, etc… Additionally, existing Data Processing support personnel will be unable to support such an increase without additional staff brought on

board. Staff levels are barely sufficient to meet current demands. Any increase in new users or systems to support would require commensurate increase in staff.

7.3   Evaluation of ERP System

Mahoning County currently uses Peoplesoft Financials and HR modules to meet its ERP needs. It is an outdated product, however, arguably, it still meets the needs of the county agencies. We do not have any software maintenance, and available training is limited due to the age of the product. Data Processing will begin evaluation of different products to determine what product on the market can meet our requirements. This process will begin in October 2006 and will run into 2007.